

BOOK REVIEW

Vectors of Plant Pathogens. Edited by K. F. Harris and K. Maramorosch. Published by Academic Press, New York, London, Toronto, Sydney and San Francisco, 1980. ISBN 0-12-326450-2. Price \$48.00. Pp. xiv + 467.

This 17-chapter book, authored by 21 contributors from 8 different countries of the world, is the third in a multi-volume series of treatises on the general topic of vectors, pathogens and plant diseases. The two preceding volumes, namely "Aphids as Virus Vectors" and "Leafhopper Vectors and Plant Disease Agents," appeared in 1977 and 1979, respectively.

Each one of the first 10 chapters of the book, with a certain exception concerning Chapter 8 (see below), deals with a different taxonomic group of insects which is known to contain species that act as vectors of plant disease agents. Chapters 14-17 are devoted to taxa other than Insecta that include vectors, to wit: mites, nematodes and fungi.

Two vector-borne plant diseases which in recent years have gained world notoriety were quite understandably allotted special chapters rather than being treated in the relevant chapters dealing with their respective vector group. The diseases are: (a) Dutch elm disease, a barkbeetle-borne fungal pandemic, prevalent mainly in temperate regions of the world (Chapter 8); and (b) lethal yellowing of coconut palm, a devastating disease in the tropics and subtropics, which is presumably caused by a mycoplasma-like organism, though its vector transmission still requires unequivocal proof (Chapter 11). The singling out of these two plant diseases by apportioning a separate chapter to each one of them in a book which is chiefly concerned with animal vectors, seems nevertheless justifiable in view of the worldwide impact of these diseases on both the economy and the environment. Moreover, thanks to the editors' apparent prudence there is no duplication of coverage between Chapter 8 handling the beetle-borne Dutch elm disease and Chapter 7 which comprehensively deals with beetles vectoring plant pathogens, in spite of the fact that the two chapters were written by different authors.

The same virtually holds true for Chapters 12 and 13 which review the involvement of insects in the transmission of bacterial and fungal phytopathogens, respectively. By narrowing the scope of the chapters on the taxonomic groups of insects down to vectors of viral pathogens mainly, the editors managed to preclude any unnecessary repetitiousness likely to occur in these two chapters dealing with the transmission by insects of nonviral plant pathogens *viz.* bacteria and fungi.

It may perhaps be argued that Chapter 1 (aphids, leafhoppers and plant-hoppers) is apparently redundant since the two preceding volumes of the series bear the titles of "aphid vectors of plant viruses" and "leafhopper vectors and plant pathogens." However, in a rapidly developing area of

research like the transmission of plant pathogens by homopterous vectors, a tri- or even biennial updating of a review is certainly not unwarranted, let alone the fact that the chapter under discussion (written by one of the editors—K. F. Harris) has been condensed into a mere 12-page synoptic review. At any rate, it would be utterly inconceivable to omit, for whatever reason, a chapter on aphids and leafhoppers from a textbook entitled “Vectors of Plant Pathogens.”

A marked improvement in the References lists concluding each chapter, as compared to the two previous volumes of the series, is the providing of full titles of the cited publications. This will undoubtedly be very much appreciated by all users of the book.

In a reference book like this, comprising 17 individual contributions of different authors, a good index, going down to exhaustive detail, is more than essential. The challenge was indeed well taken up here in the form of a 29-page index, listing some 2,800 items.

Thus, the careful choice of top expert authors, coupled with a good measure of skillful judgment exercised by the editors, and the highly professional presentation on the part of the publishers, have all together resulted in a most welcome, comprehensive and updated compilation of core reference and background information on its subject. It will doubtlessly be indispensable in providing the most up-to-date handbook on vector transmission of plant disease agents currently available. As a university instructor charged with the teaching of a course on this very subject, I can state with a great deal of gratitude that the book has definitely made my task very much easier now. Without any hesitation I thoroughly recommend this book to specialists and non-specialists alike who have an interest in vector-related plant pathology, and/or phytopathogen-related entomology, whether it be from the research or teaching point of view.

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Handbook of Plant Virus Infections: Comparative Diagnosis. E. Kurstak, ed. Elsevier-North Holland. 944 pp. \$192.75.

Plant virus infections can spread in various ways and the most prevalent is by means of insect vectors. Therefore the subject of this treatise is of special interest to entomologists. Hundreds of plant virus diseases have been described all over the world, but the causative viruses were often inadequately identified and, in many instances, the viral nature of the diseases not properly ascertained. In fact, more than 200 viruses, incompletely characterized by 1981, remain ungrouped, and only 23 virus groups and 2